

I. GENERAL

PROJECT DESCRIPTION

THIS PROJECT INVOLVES A TRAFFIC SIGNAL MODIFICATION IN CONJUNCTION WITH PHASING CHANGES TO EXCLUSIVE/PERMISSIVE ALONG WISCONSIN AVENUE. WISCONSIN AVENUE IS ASSUMED TO RUN IN A NORTH-SOUTH DIRECTION.

II. INTERSECTION OPERATION

THE INTERSECTION WILL OPERATE IN A NEMA EIGHT-PHASE, FULLY TRAFFIC-ACTUATED MODE WITH ALL APPROACHES OPERATING WITH EXCLUSIVE LEFT TURN PHASING I.E. BOTH NORTHBOUND AND SOUTHBOUND ROUTE 355 (WISCONSIN AVE.) WILL BE SWITCHED FROM A SPLIT PHASE TO RUN CONCURRENTLY WITH AN EXCLUSIVE/PERMISSIVE LEFT TURN PHASE FOR EACH APPROACH. THE EXCLUSIVE/PERMISSIVE LEFT TURN PHASING SHALL REMAIN IN OPERATION ON THE MD 191 (BRADLEY BLVD.) APPROACHES.

III. CONTROLLER REQUIREMENTS

UTILIZE EXISTING FULLY TRAFFIC-ACTUATED, EIGHT-PHASE CONTROLLER WITH SYSTEM PACKAGE, AND ALL AUXILIARY EQUIPMENT. INSTALL ONE (1) NEW TWO-CHANNEL, TIME DELAY OUTPUT LOOP DETECTOR AMPLIFIER HOUSED IN A NEMA SIZE "6" BASE MOUNTED CABINET.

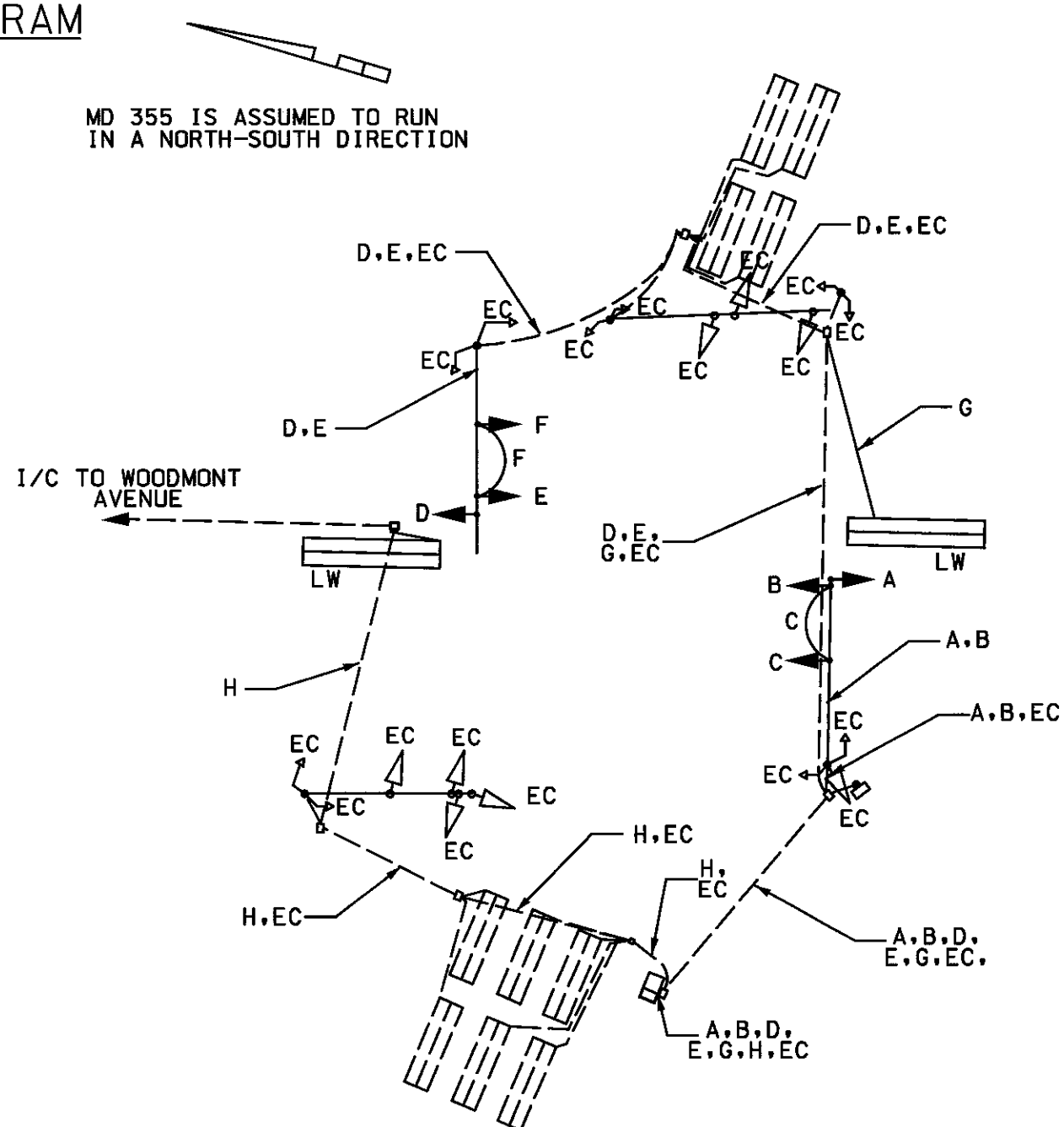
IV. SPECIAL NOTES

1. MAINTENANCE OF TRAFFIC WILL BE HANDLED BY THE CONTRACTOR UTILIZING THE FOLLOWING STANDARD PLATES FOR TRAFFIC CONTROL: 104.00-1 - 104.00-24, 104.17-01, 104.17-02, 104.39-02, 104.40-02, 104.41-02, 104.48-01, 104.48-02, 104.49-01, 104.49-02, 104.81-01.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PULLING ALL CABLE TO THE CABINET AND SHALL PROPERLY LABEL EACH CABLE. CONTACT MR. BOB GONZALES AT (240) 777-8761 72 HOURS IN ADVANCE OF INTENDED WORK.
3. ALL UNDERGROUND AND OVERHEAD UTILITIES SHOWN ON THESE PLANS ARE SCHEMATIC ONLY AND MAY NOT BE COMPLETE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR NOTIFYING MISS UTILITY PRIOR TO CONSTRUCTION SO THAT ALL UTILITIES MAY BE LOCATED IN THE FIELD. IF THE CONTRACTOR PERCEIVES THAT A CONFLICT BETWEEN THE UTILITIES AND THE TRAFFIC SIGNAL WILL OCCUR, THE CONTRACTOR SHALL NOTIFY THE PROJECT ENGINEER IMMEDIATELY SO THAT THE CONFLICT MAY BE RESOLVED.

PHASE CHART AND PHASING DIAGRAM

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15,18	16,17	19,22	20,21
THE CONTROLLER MAY SKIP TO PHASES 1 & 6 OR 2 & 5 OR 3 & 8																	
Phase 1 & 5	←G-R	←G-R	R	←G-R	←G-R	R	R	R	R	R	R	R	R	DW	DW	DW	DW
1 & 5 Change	R	R	R	←G-R	←G-R	G	R	R	R	R	R	R	R	W	DW	DW	DW
Ped. Clear	R	R	R	←G-R	←G-R	G	R	R	R	R	R	R	R	R	FL/DW	DW	DW
1 Change	R	R	R	←Y-G	←Y-G	G	R	R	R	R	R	R	R	R	DW	DW	DW
Phase 2 & 6	←G-G	←G-G	G	R	R	R	R	R	R	R	R	R	R	DW	W	DW	DW
Ped. Clear	←G-G	←G-G	G	R	R	R	R	R	R	R	R	R	R	FL/DW	FL/DW	DW	DW
5 Change	←Y-G	←Y-G	G	R	R	R	R	R	R	R	R	R	R	DW	DW	DW	DW
Phase 2 & 6	G	G	G	G	G	G	R	R	R	R	R	R	R	W	W	DW	DW
Ped. Clear	G	G	G	G	G	G	R	R	R	R	R	R	R	FL/DW	FL/DW	DW	DW
2 & 6 Change	Y	Y	Y	Y	Y	Y	R	R	R	R	R	R	R	DW	DW	DW	DW
Phase 3 & 7	R	R	R	R	R	R	←G-R	←G-R	R	←G-R	←G-R	R	R	DW	DW	DW	DW
3 & 7 Change	THE CONTROLLER MAY SKIP TO PHASES 3 & 8 OR 4 & 7 OR 4 & 8																
Phase 3 & 8	R	R	R	R	R	R	←G-G	←G-G	G	R	R	R	R	DW	DW	DW	W
3 Change	R	R	R	R	R	R	←Y-G	←Y-G	G	R	R	R	R	DW	DW	DW	FL/DW
Phase 4 & 7	R	R	R	R	R	R	R	R	R	R	←G-G	←G-G	G	R	DW	DW	W
7 Change	R	R	R	R	R	R	R	R	R	R	←Y-G	←Y-G	G	R	DW	DW	FL/DW
Phase 4 & 8	R	R	R	R	R	R	G	G	G	G	G	G	R	R	DW	DW	DW
4 & 8 Change	R	R	R	R	R	R	Y	Y	Y	Y	Y	Y	Y	R	DW	DW	DW
4 & 8 Alt.	R	R	R	R	R	R	G	G	G	G	G	G	R	R	DW	DW	W
Ped. Clear	R	R	R	R	R	R	G	G	G	G	G	G	R	R	DW	DW	FL/DW
4 & 8 Change	R	R	R	R	R	R	Y	Y	Y	Y	Y	Y	Y	R	DW	DW	DW
Preemption	R	R	R	R	R	R	R	R	R	R	R	R	R	G	G	DW	DW
Preemption Change	R	R	R	R	R	R	R	R	R	R	R	R	R	Y	Y	DW	DW
Flashing	FL/Y	FL/Y	FL/Y	FL/Y	FL/Y	FL/Y	FL/R	FL/R	FL/R	FL/R	FL/R	FL/R	FL/R	Dark	Dark	Dark	Dark
Operation	FL/Y	FL/Y	FL/Y	FL/Y	FL/Y	FL/Y	FL/R	FL/R	FL/R	FL/R	FL/R	FL/R	FL/R	Dark	Dark	Dark	Dark

WIRING DIAGRAM



WIRING DIAGRAM

- LW 1 CONDUCTOR ELECTRICAL CABLE (#14 AWG)
- C.D.E.F 2 CONDUCTOR ELECTRICAL CABLE (#14 AWG) (Aluminum Shielded)
- C.F 5 CONDUCTOR ELECTRICAL CABLE (#14 AWG) (Aluminum Shielded)
- A.B.D.E 7 CONDUCTOR ELECTRICAL CABLE (#14 AWG)

EQUIPMENT LIST "A"

A. EQUIPMENT TO BE FURNISHED BY THE STATE HIGHWAY ADMINISTRATION

QUANTITY	UNITS	CATEGORY CODE NO.	DESCRIPTION
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EQUIPMENT LIST "B"

B. EQUIPMENT TO BE FURNISHED AND/OR INSTALLED BY THE CONTRACTOR

QUANTITY	UNITS	CATEGORY CODE NO.	DESCRIPTION
1	LS	120500	Maintenance of Traffic.
1	LS	130850	Mobilization.
10	LF	805160	1" liquid tight flexible non-metallic conduit for detector sleeve.
2	EA	813015	Install overhead sign.
26	EA	860272	12 in. vehicular traffic signal head section
400	LF	861104	Electrical cable - 2 conductor (Aluminum Shielded)
50	LF	861107	Electrical cable - 5 conductor (Aluminum Shielded)
1500	LF	861108	Electrical cable - 7 conductor (No.14 AWG)
1000	LF	862101	Loop wire encased in flexible tubing (No.14 AWG)
300	LF	862102	Saw cut for signal (loop detector)
2	EA	800000	Splice kit for loop detector
25	SF	973023	Sheet aluminum signs consisting of: 2 ea. R10-12 36"x42"
1	LS	873001	Remove and dispose of existing equipment
1	EA	963007	Two channel loop detector amplifier (shelf mount).

EQUIPMENT LIST "C"

C. EXISTING EQUIPMENT TO BE REMOVED BY THE CONTRACTOR AND DELIVERED TO THE STATE HIGHWAY ADMINISTRATION, 7491 CONNELLEY DRIVE, HANOVER, MARYLAND 21076.

QUANTITY	DESCRIPTION
NONE	

PROJECT CONTACTS

THE CONTACT PERSONS FOR SHA ARE AS FOLLOWS:

Mr. Richard L. Daff, Sr.
Chief, Traffic Operations Design Division
Phone # (410) 787-7630

Mr. Robert Gonzales
Engineer III (Montgomery County)
Phone # (240) 777-8761

Mr. Wayne Mowdy
Asst. District Engineer - Maintenance
Phone # (301) 513-7304

Mr. Augustine Rebish
Asst. District Engineer - Utility
Phone # (301) 513-7350

Mr. Lee Starkloff
District Engineer - Traffic
Phone # (301) 513-7358

Mr. Ed Rodenhizer
Signal Shop Supervisor
Phone # (410) 787-7652

WELLS & ASSOCIATES, LLC

TRANSPORTATION, TRAFFIC, AND PARKING CONSULTANTS
1420 Spring Hill Rd., Suite 600
McLean, VA 22102
Phone: (703) 917-6620 Fax: (703) 917-0739
170 Jennifer Rd., Suite 260
Annapolis, MD 21401
Phone: (410) 266-5723 Fax: (410) 266-9189

REVISIONS

03-04	INSTALL E/P PHASING ON MD 355
07-02	ADD CROSSWALK AND PEDS ACROSS SOUTH LEG OF MD 355 SHA NO.: AT2885185
RRZ	
10-97	INSTALL E/P PHASING ON MD 191 SHA NO.:
NML	



MARYLAND DOT - STATE HIGHWAY ADMINISTRATION
Office of Traffic & Safety
TRAFFIC ENGINEERING DESIGN DIVISION
TRAFFIC SIGNAL DESIGN PLAN
WISCONSIN AVENUE & BRADLEY BOULEVARD

DRAWN BY: VLG/WT
CHECKED BY: WT/LES
SCALE: NTS
DATE: 03/02/04

F.A.P. NO. ---
S.H.A. NO. ---
COUNTY: MONTGOMERY
LOG MILE: 15035501.16

TS NO. 1857C
T.I.M.S. NO. 6078

SHEET NO. 2 OF 2